

ABSTRACT

Bifurcated processes, in which a shadow process in a first environment is controlling thread scheduling for a trusted agent in a second, high assurance environment, can be debugged via a two-phase initialization of the debugger. In the first phase, initial set up is accomplished for the trusted agent, but no shadow process will schedule execution for any thread of the trusted agent. The debugger will then be attached. In a second phase, the shadow process will begin scheduling threads for the trusted agent. In order to allow the debugger access to the process memory of the trusted agent or to set or get information regarding a particular thread of the trusted agent, a thread which is either a thread belonging to the trusted agent or belonging to the second execution environment and matched with the trusted agent is used. This admin thread is used to perform the work of retrieving process memory and information regarding threads of the trusted agent, allowing such information from the high assurance environment to be found and used in the debugger in the first execution environment.